Appendix K – Market Plan Assumptions and Limitations

General Assumptions for the CARES Planning Process

- Market Plans address the impact at each market and facility of CACI/Milliman Demand Model data from 2002 through 2022. Workload demand assumptions data cannot be altered.
- Market Plans are developed without budget limitations on the total amount of operational or capital investment dollars the VA is able to support today or in the future.
- Market demand model projections are not restricted by market share.
- Market Plans are developed, using the most cost effective alternative for meeting the projected workload demand in each market or facility.
- Market Plans are developed without full knowledge of the ability to obtain the appropriate staffing levels and mix for 2002 through 2022.
- Market Plans are developed without full knowledge of the ability to obtain services in the community for 2002 through 2022.

Assumptions and Limitations of the IBM Market Planning Tool

Workload projections

Non-flat lined CARES Categories:

Workload projections were provided by CACI at the county and facility level. In order to plan space and resources for the future, all workload projections for all CARES categories must be considered in the analysis. It is impossible to plan space for one type of care, such as inpatient medicine, without knowing what the needs are in other types of care, such as outpatient specialty care. Therefore, all CARES categories had to be analyzed in order to predict future underutilized space. The space needs were calculated for each facility, by category, based on in-house workload.

Impact: Since the VISN was required to resolve all workload gaps, regardless of whether there was a planning initiative, it is difficult to determine which operating costs and capital costs are directly associated with a specific Planning Initiative. All resolutions were at the Category level, and include a resolution to a gap, as well as any space improvements or other VISN initiatives.

Flat lined CARES categories:

CARES elected to flat line many categories for which adequate projections could not be determined. These categories include Nursing Home Care, Inpatient Residential Rehabilitation, Inpatient Domiciliary, and any negative gaps in Outpatient Mental Health.

Impact: The VISNs could still elect to make capital improvements in these flat lined categories, but the space needs could not be determined accurately.

Special Disability Populations:

CARES elected to determine projections for Spinal Cord and Blind Rehab on a VISN by VISN basis, instead of at the county or facility level.

Impact: The VISNs could still elect to make capital improvements in Spinal Cord and Blind Rehab, but the space needs could not be determined accurately. The space needs for these categories were determined off line, (not calculated by IBM) and entered by the user.

Facility Inventory

The first step in the IBM Market Planning Template was to determine the facility inventory for the VISN in order to allocate workload to each facility. Then once workload was allocated the costs and space could be determined. This required the VISN to add or delete sites of care to the database. The VISN could either show each site of care, including CBOCs (contract or leased space), or they could show the workload and space for CBOC's rolled up at the parent station. Entering each separate facility would require going through all the workload for every facility, where rolling the CBOC's into the parent would require less data entry for the VISN.

Impact: The facility inventory in the IBM Planning Template is not a total complete picture of all the facilities planned in CARES. The VISNs could elect to show each facility separately (including contract or leased CBOCs), or could just combine the space and workload of all the CBOC's at the parent. Therefore, CARES is unable to separate out the costs and space for a specific facility or CBOC. In addition, to determine costs at a specific facility, the costs may include all the CBOCs, or may not. It would depend on whether the VISN included the CBOCs rolled up into the parent. Therefore, in outputs, we are only able to show totals for the parent and any CBOC's assigned to that facility.

Managing Workload

The workload projections for non-flat lined CARES Categories were provided at the county level. Then, based on how the enrollees in each county chose a facility to receive their care, the workload projections were also provided by facility. The first step, "allocation of the workload", in the development of a Market Plan requires the VISN to determine by county (or market) a facility where the care will be received. The VISNs were encouraged to only change where an enrollee would normally go for a certain type of care if the services were changed at a facility that required an enrollee to go to a different location. VISNs were discouraged from allocating workload to try to evenly distribute workload, or to

ensure adequate workload at a certain site. The VISN cannot necessarily control where an enrollee chooses to go for care, unless the care isn't available. (For example, if inpatient medicine were no longer provided at one facility, the VISN would allocate that workload to another facility.)

Once the allocations of workload were completed, the VISN would then elect how the care was to be provided. They would chose between contracts, in-house, sharing, etc. Costs were then calculated for each method. VISNs were encouraged to develop more than one alternative for how to provide the care (or space), and were required to do so in categories for which they had Planning Initiatives.

Space Projections

Once the in-house workload had been determined for each category at each facility, the required in-house space for that workload was calculated.

Space Calculations: Projected space needs are based upon space drivers specific to each facility and each CARES category as follows:

In July 2002, each VISN conducted (or updated) a Space & Functional Survey indicating how the existing space at each facility is utilized. In addition, the Survey utilized a Space Driver that was based on the number of uniques and the level of service provided at a facility to determine "ideal space" for each department. The facility/VISN had the option of adjusting the space projections based on individual facility needs and observations. Based on this information, CARES utilized the existing space assignments for the baseline space, and then utilized the ideal square footage to determine the projected space for the future in-house workload for each facility. The ideal square footage provided by the facility was converted to a square foot per workload unit. As these calculations produced results that varied a great deal from facility to facility, CARES took some additional steps to ensure some standardization across the nation. If a facility had a projected SF/workload unit less than the national average for that category, CARES utilized the national average. If a facility had a projected SF/workload unit much greater than the national average, CARES limited the facility to 150% of the national average.

Non-flat lined CARES Categories: For the 6 CARES categories that were utilized in the Planning Initiative analysis, the projected space was calculated using the ideal space calculations for each individual facility.

Flat lined CARES Categories: For the flat lined categories, the space was projected using current workload, and the VISN could elect to change these space projections based on specific needs. These categories include Nursing Home Care, Inpatient Residential Rehabilitation, and Inpatient Domiciliary. In

addition, in June, the VISN was also able to manually adjust the space required for Ancillary and Diagnostics.

Special Disability Programs: For Blind Rehab and Spinal Cord Injury categories, the space was projected using current workload, and the VISN could elect to change these space projections based on how they distributed the VISN level workload.

Non-workload CARES Categories: Categories that did not have workload were treated differently. Research space was calculated based on the amount of research funding projected by the VISN. Administrative space was originally projected using a % of the total space at a facility, however the user was allowed to adjust this amount in June. Other space (quarters, day care centers, etc) was flat lined by CARES, but the VISN could elect to make changes.

Impact: The use and impact of the space projections in CARES was not known during the survey period for the Space and Functional Survey. Therefore, the VISNs would not have known the impact that the space driver numbers would have in CARES projections. In addition, the survey quality varied and uniformity was difficult to maintain across the VA, causing variability in the results and adjustments in the space survey. The scores were not consistent. A certain space condition in one VISN may have produced a 3, where in another VISN it produced a 4. In CARES, this impacted the decision on whether a VISN may want to renovate the space, and it also impacted the construction cost when they elected to renovate.

By leveling out the SF per workload unit (bringing low ones up to the national average, and those over the average down to at least 150% of national average), this may have required more space at some sites then needed, or not required enough space needed at others.

The Ancillary and Diagnostics category had very large gaps for increasing workload, and therefore, the space required was also large. In June, CARES elected to allow VISNs to alter the space driver projection for Ancillary to allow VISNs to reduce the space requirement. This allowed for alternate methods of providing the service that didn't require space.

Some VISNs disagreed with the space calculation for Research (1 SF for every $150 of Research funding.) Research space projections were considered either too much space or too little.

The architecture or layout of a building can also represent inefficient use of current space. Some space is not conducive for the type of care needed.

For flat lined and Special Disability Programs, the space needs were not determined by CARES. They were determined off line by the VISN and entered by the user. The VSSC did provide a space calculator for a guideline

Managing Space/Resolving the Space Gap

Once the in-house workload was determined and the space calculated, the VISN then determined how to provide the space. The VISN had to work through the categories in a particular order in order to effectively use the existing space (vacant space) at a facility. The categories were ordered such that the categories higher on the list created the most vacant space, and those at the bottom of the list, needed to add the most space. The first choice was to re-use the existing space already assigned to that type of care. Depending on the condition of that space, the VISN could elect to renovate that space to bring it up to state–of-the-art. If space was still needed beyond re-using the existing space, then the VISN would elect to add space either by new construction, converting vacant space, leasing space or finding an enhanced use project or donated space to gain additional square footage. The gap was required to be resolved within at least 75% of the projected square footage needed for the projected in-house workload demand.

Impact: VISNs were required to resolve the space gap within 75% of projected space needed. The 25% allowance was to help incorporate other factors that could reduce the amount of space needed such as efficiency gains. This may have forced projects that the VISNs didn't feel were necessary. Some VISNs still felt that the 25% was not enough allowance to incorporate such things as:

- Renovation of existing space to improve the functionality of space that would allow for more workload to be handled within an existing footprint.
- Extending clinic hours to address increased capacity without increasing space needed.
- VISN indication that workload can be accommodated within existing space, with or without renovations.
- Other staffing efficiencies

All resolutions in the Market Planning Template are at the facility and category level. The solutions are not presented at the building or floor level. In addition, the any domino moves must be planned off line, and not using the template. The planning off line must be done at the lower levels, so in many cases, narratives were important for clarifying some space solutions

With the categories ordered in the VISN such that the top categories created the most vacant space, and the bottom categories needed to add the most space, the order may not be perfect for the individual facilities. Therefore, some in some cases there may be a category higher on the list that needs to use space currently being used by a category farther down on the list. So the option to

"convert vacant space" in order to meet additional space needs could not be used. It could only be used if the space was already in the vacant pool. In other words, since the CARES categories had to be completed in a pre-established sequential order, sometimes vacant space was not available to solve a space gap for a particular CARES category even though the VISN knew it would become vacant in a later category. Each VISN had a chance to rearrange the order of their categories, but since gaps were facility specific, what was needed for one facility did not necessarily fit another facilities need, so this option could not fully solve this problem.

Impact
Less than ideal space solutions were entered in some CARES categories to meet the space gap while space was left in reserve under vacant that is meant to solve a CARES category gap. The VISN may have elected to use an option called "Donate Space", which has no renovation costs associated with it, or "New construction", when they really weren't adding space. This was infrequent.

Vacant Space Calculations:

Once all the CARES categories space gaps have been resolved, with the appropriate space assigned (within 75% of projected), the vacant space remaining at the facility was calculated for each year. If a CARES Category had more space assigned than the space driver, the overage went to vacant space. The application forced the overages into vacant space. The VISN selected how they would eliminate or reduce their vacant or underutilized space through demolition, enhanced use, out leasing or other methods. The VISNs were also allowed to place vacant space in a category labeled "Reserved". This was used for space that was not suitable for other uses, OR was space they elected to keep using for specific categories, even if it was over the space driver calculation. For example, if Admin was in 40,000 SF, and the space driver calculated a need for 30,000, the 10,000 would be moved into vacant space. When the VISN went to manage the vacant space, they may elect to "reserve' this 10,000 for Admin, and use more space than needed.

Impact: Since all the CARES categories have to be resolved prior to working on vacant space, anytime a VISN needed to go back and make any changes in the other categories, any scenario entered for vacant space will be deleted. This was because any changes made in the other categories would impact the amount and use of vacant space. If they changed the % contracted, the space needed would change, and thus the amount that is in the vacant space pool would change. If new construction was the original plan, and then the VISN wanted to change it to "convert vacant", then the vacant space pool would change. Therefore, VISNs were hesitant to go back and make minor changes, as it meant they had to re-do their vacant space scenario.

The Reserved Category is the number used to determine under utilized and vacant space remaining at each facility. In some cases, this reserved space is needed for a function, not reflected in the workload and space projections.

Cost Calculations

Workload costs: The contract costs were determined based on the Medicare Reimbursable rates, by county, provided by CACI (the contractor that provided the workload projections). Adjustments to costs higher than Medicare rates could be made in the cost/savings section. The in-house costs were determined using DSS (Decision Support System) total costs by facility (or nearest facility for those facilities that had no history of costs yet). Total costs included Fixed Indirect costs (~37%, which includes Fiscal, Engineering, Housekeeping, Directors office, etc., but no national overhead items), Fixed Direct costs (~7% which includes ward clerks, supplies, direct admin, etc) and Variable Direct costs (~66% which includes direct patient care costs including nursing, physicians, medical supplies, etc.). Total costs were used for the baseline workload amount only. For any small increases of decreases in workload, only the Variable Direct costs were used. For larger increases and decreases in workload, the Variable Direct and the Fixed Indirect costs were used.

Capital costs: Professional Estimators in the Office of Facilities Management provided the capital costs used for CARES. This included the costs for renovation, new construction, leases and lease build-out. These regionally adjusted construction and lease unit costs are based on the condition (score) and type of space to be renovated, the type of space to be constructed, the type of new construction or the type of space to be leased. In addition, the Estimators also provided the cost of maintaining vacant space.

Impact

Contract Costs: the Medicare costs from CACI are at the county level. Once the workload is shifted to a facility, the location of the enrollee user is no longer known, so the county costs cannot be used reliably. Therefore, CARES used an average cost for a Market. In some cases, this may result in higher or lower costs than expected at the facility, so the VISN was encouraged to alter these costs as appropriate using the Cost/Savings/Profit input page in the IBM Market Planning Template. Due to the short timeframe many VISNs may not have utilized this input page to its full intent.

Savings/Costs/Profits: The VISN had the opportunity to estimate future savings, costs, revenues and profits by facility by category. VISNs input estimates such as receiving revenue from outside sources, incurring higher costs than Medicare, acquiring profits through venture capital or adjusting construction costs for seismic projects. In many cases, a campus may be proposed for Enhanced Use, but a fully developed plan is not complete. Therefore, many of these estimates

will change as the plans are more fully developed. The same applies for any efficiency savings proposed.

Construction Costs: The capital investment costs were calculated using a unit cost per square foot. A fully developed cost estimate will still need to be developed in order to provide an accurate cost. These estimates in CARES are good for planning purposes, but not for funding purposes. For funding purposes, the fully developed cost estimate is required.

Seismic & Hazardous Material handling Costs: The additional construction costs needed for Seismic or hazardous material handling were not an automatic input into the template. VISNs were to utilize the Savings/Cost/Profit input page to include these additional costs. The utilization of this page varied by VISN.

Land and Parking:

- Excess land and its disposition were not included in CARES unless specifically identified by the VISN. Many VISNs may have overlooked this.
- Parking projects were not consistently identified in IBM; some VISNs included parking projects under Vacant Space with a note in the narrative. This may have been overlooked by many VISNs.

Impact: Since this was not a requirement, many VISNs may not have provided estimates for land or parking.

Outputs:

The IBM Market Planning Template was designed as a relational database to allow the reviewers and others to garner specific information based on the user's needs. Specifically, all costs and space can be provided broken out by:

VISN
Market
Facility
Category
Year
Type of care (Inpatient, outpatient or other)
Type of capital investment (renovation, new construction, lease or enhanced use)

Impact: The outputs are not by Planning Initiatives, so it is not easily discerned what is a solution to a Planning Initiative. The solutions are defined at the facility level, and the Planning Initiatives were defined at a Market and/or VISN level. The IBM application also doesn't allow for tying demolition to a specific solution, as demolition is only in the Vacant space category, so if a facility moved a couple services out of a building to renovated space in another building, those costs cannot be related in the outputs.